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SPECIFICATION COVER SHEET

Client: Gowanus Canal Remedial Design Group

Project: Gowanus Canal – 4th St Turning Basin Pilot Study – Dredging and Capping

Project #: HPH106A

SPECIFICATION SECTION: 01 57 19 **TITLE:** TEMPORARY ENVIRONMENTAL CONTROLS

SPECIFICATION PREPARED BY: (Specification Preparer, SP)	Signature	Jessica Fears	5/19/17
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SCOPE AND FORMAT CHECKED BY: (Scope and Format Checker, SFC)	Signature	LSW	5/19/2017
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APPROVED BY: (Specification Approver, SA)	Signature	J.F. Beech	19 May 2017
	Name	J.F. Beech	Date

Record of Revision (Number and initial all revisions)

Rev. No.	Reason	Date	By	Checked	Approval
0	TB4 Pilot Study Design – Issued for Bid	05/19/17	JMF	LSW	JFB

SECTION 01 57 19

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SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.01 SUMMARY

A. This Section establishes the requirements for temporary environmental controls to minimize emissions and discharges from the Site.

1.02 RELATED SECTIONS AND PLANS

A. Section 01 33 00 Submittals

B. Section 01 35 29 Health, Safety, and Emergency Response Requirements

C. Section 01 51 00 Temporary Utilities

D. Section 01 57 13 Temporary Erosion and Sediment Control

E. Section 02 51 19 Dredged Sediment and Waste Management

F. Section 02 60 16 Sediment and Floatables Containment

G. Stormwater Pollution Prevention Plan (SWPPP)

H. Contract Documents

1.03 REFERENCES

A. Rules of the City of New York (RCNY). "Title 15: Department of Environmental Protection." <http://rules.cityofnewyork.us/codified-rules?agency=DEP>.

B. New York City Administrative Code (NYCAC). "Title 24: Environmental Protection and Utilities." <http://public.leginfo.state.ny.us/lawssrch.cgi?NVLWO:>.

C. TRC, 2017. Gowanus Community Air Monitoring Plan (Draft in progress).

D. Wilson Ihrig, October 2015. "Gowanus Canal Remedial Design Project Brooklyn, New York, RTA-1 and TB-4 Noise and Vibration Baseline Report."

E. Wilson Ihrig, December 2016. "Noise Monitoring Report for Gowanus Canal Remedial Design Project TB-4 Debris Removal Pilot Study."

F. Geosyntec, 2017. "Project Completion Report, Debris Removal Pilot Study, 4th Street Turning Basin, Gowanus Canal."

G. Standards and regulations contained in Title 40, Code of Federal Regulations, including, but not limited to:

- Part 110 "Discharge of Oil";
- Part 117 "Determination of Reportable Quantities for Hazardous Substances"; and
- Part 302 "Designation, Reportable Quantities, and Notification".

H. Geosyntec, 2017. "Stormwater Pollution Prevention Plan (SWPPP) for Construction Activities at Gowanus Canal Superfund Site." (Provided as Attachment K.1)

1.04 SUBMITTALS

A. The Contractor shall submit the following to the Owner's Representative in accordance with Section 01 33 00:

1. Construction Noise Mitigation Plan that meets the requirements set forth in RCNY Title 15, Chapter 28: "Citywide Construction Noise Mitigation" including, but not limited to:

   a. Construction devices to be used;

   b. Noise mitigation barriers to be used; and

   c. Means and methods for implementing operational controls and/or noise barriers to mitigate construction-related noise as required.

2. Construction Air Emissions and Odor Control Plan including, but not limited to:

   a. Types of foaming odor suppressants to be used;

   b. Types of air emissions controls to be used;

   c. Means and methods for implementing operational and/or physical air emissions and odor controls as required; and

   d. Contingency plan if odor thresholds are reached.

3. Water Quality Control Plan including, but not limited to:

   a. Types of water quality controls to apply to prevent and mitigate exceedances of water quality monitoring criteria as defined in this Section; and

b. Means and methods for implementing operational and/or physical water quality controls as required.

4. Dust Control Plan that meets the requirements set forth in RCNY Title 15, Chapter 13: "Rules Pertaining to the Prevention of the Emission of Dust from Construction Related Activities" including, but not limited to:

   a. Means and methods to control dust during construction activities and transport of materials.

5. Spill Prevention and Control Plan including, but not limited to:

   a. Procedures, instructions and reporting requirements in the event of an unforeseen leak, spill, or other release containing a substance regulated under State or local laws and/or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302;

   b. Contact information for the person responsible for reporting spills or releases of hazardous materials and the chain of command for reporting this information to the Owner's Representative and legally required emergency response authorities, regulatory agencies, and other reporting channels;

   c. Contact information for the person responsible for implementing spill response measures;

   d. Training requirements for personnel who will be responsible for implementing cleanup;

   e. List of materials and equipment to be made available onsite for containment and potential cleanup of spilled materials;

   f. Means and methods to prevent, control and clean spills of materials stored onsite or on barges; and

   g. Means and methods to clean up soils and/or water contaminated due to malfunction of the Dredge Water Treatment System (DWTS) (e.g., overflow or spills).

6. Decontamination Plan including, but not limited to:

   a. Decontamination measures including description of facilities and procedures for decontamination of trucks, construction equipment (including barges and other equipment in contact with sediments, processed dredged material, decant water, leachates, and surface water runoff) and rented facilities (such as road mats and water treatment equipment) before they leave the site. The

discussion shall also include methods for containment and management of wastes resulting from these activities.

b. The Contractor has the option to use the existing asphalt pad to perform decontamination activities as described in this Section; however, the Contractor may elect to submit an alternate design for an additional decontamination pad, if necessary for site operations. If the Contractor submits an alternate design for approval by the Owners Representative, the decontamination requirements in this Section shall apply to the new design.

1.05 HEALTH AND SAFETY REQUIREMENTS

A. The Contractor shall comply with environmental health and safety/training requirements in accordance with the approved Health and Safety Plan and Section 01 35 29.

PART 2 PRODUCTS

2.01 MATERIALS

A. Materials covered under this Section shall include but not be limited to the following items:

1. Water. The Contractor shall provide sufficient water for controlling dust emissions. Water may be obtained from an NYC fire hydrant adjacent to the Site following proper permitting according to Section 01 51 00.

2. Sediment and erosion controls. The Contractor shall furnish materials for sediment and erosion control devices according to Section 01 57 13 and the Sediment and Erosion Control (S&EC) Plan shown on the Construction Drawings and associated notes.

3. Noise barriers. The Contractor shall furnish appropriate materials for minimizing work-related noise as outlined in this Section.

4. Air emissions and odor control. The Contractor shall furnish odor suppressant foams described below and appropriate equipment for controlling air emissions and odors associated with debris and sediment removed from the Canal. The Contractor may propose an alternate foam product, subject to approval by the Owner's Representative. Contractor shall dispense foam according to the manufacturer's recommended instructions.

a. The Contractor shall furnish a fast-acting odor suppressant foam for immediate short term mitigation of odors such as RusFoam® OC (AC-645) (RusMar Foam Technologies, Incorporated).

b. The Contractor shall furnish a long-duration odor suppressant foam for long-term mitigation of odors such as RusFoam® LM (RusMar Foam Technologies, Incorporated).

5. Water quality control. The Contractor shall furnish appropriate materials for controlling turbidity in the Canal in accordance with this Section and Section 02 60 16.

6. Spill Response Kit. The Contractor shall maintain a spill response kit onsite at all times (including all vessels) of sufficient size to contain and absorb the capacity of the largest fuel or hydraulic fluid tank of Contractor-provided equipment.

7. Spill control materials. The Contractor shall furnish appropriate materials for controlling and cleaning spills from material storage containers and/or the DWTS.

2.02 EQUIPMENT

A. The Contractor shall provide all equipment to perform the activities associated with temporary environmental controls including, but not limited to:

1. Pumps, hoses, and other water handling equipment used for dust control;

2. Water truck(s) or other equipment needed to provide dust suppression independent of moisture conditioning activities; and

3. Equipment for deploying environmental controls.

PART 3 EXECUTION

3.01 DUST CONTROL

A. The Contractor shall perform dust control throughout the project duration to prevent the occurrence of dust. As necessary or otherwise directed by the Owner's Representative, clean water shall be applied to the surfaces of haul roads and work areas when equipment is moving about the Site in order to control dust in accordance with the CAMP (TRC, 2017). Particulate matter transported in trucks and other vehicles shall be covered when being transported and any particulate matter delivered to or kept on site shall be sufficiently managed to prevent particulate matter from becoming airborne.

B. The Contractor shall control dust during in-barge mixing in accordance with Section 02 51 19.

3.02 NOISE CONTROL

A. Noise monitoring will be performed by others to measure Equivalent Noise Levels (Leq) (e.g. an hourly "average" of sound level) and Maximum Sound Levels (Lmax) (e.g. the highest sound level that occurs during the time period of measurement). Noise limits for Leq and Lmax for various times and receptors are provided in Table 1 below (full report provided upon request). The Contractor shall be prepared to implement appropriate noise controls in response to monitoring data in accordance with the Construction Noise Mitigation Plan and this Section.

Table 1. Allowable Equivalent Noise Levels and Maximum Noise Levels

Land Uses	Equivalent Noise Level[a] – Leq dBA (whichever is greater)	Lmax Level – dBA, slow
Daytime (7AM to 6PM)		
Residences and buildings where people normally sleep	75 or Background + 5[a]	85[e] 90 (impact equipment)
Commercial Areas	80 or Background + 5[a]	None
Industrial Areas	80 or Background + 5[a]	None
Evening (6PM to 10PM)		
Residences and buildings where people normally sleep	65 or Background + 5	85
Commercial Areas	80 or Background + 5	None
Industrial Areas	80 or Background + 5	None
Nighttime (10PM to 7AM)	No nighttime work planned	
Residences If background < 70 dBA If background ≥ 70 dBA	 Background + 5 Background + 3	 80 80
Commercial Areas	None	None
Industrial Areas	None	None
Weekend (Sat. 7AM to 6PM)	No Weekend work planned	
Residences and buildings where people normally sleep	65 or Background + 5	85
Commercial Areas	80 or Background + 5	None
Industrial Areas	80 or Background + 5	None
Weekend (Sat. 6PM to Mon 7AM)	No Weekend work planned	
Residences If background < 70 dBA If background ≥ 70 dBA	 Background + 5 Background + 3	 80 80
Commercial Areas	None	None
Industrial Areas	None	None

Notes:

a) Noise level limits based on total noise level due to construction noise combined with typical ambient conditions
b) All measurements taken at the affected lot-line and at least 50 feet from construction activity being measured
c) Noise level limits based on hourly intervals
d) Lmax noise level limits are the maximum noise level that occurs over hourly intervals
e) Noise from impact equipment may be exempt from the Leq recommendation, however is subject to a lot line Lmax limit of 90 dBA

B. Perform noise-producing work in accordance with RCNY Title 15, Chapter 28: "Citywide Construction Noise Mitigation" and NYCAC Title 24, Chapter 2: "Noise Control."

C. Noise-producing work may occur between the hours of 7:00 AM and 6:00 PM local time on weekdays, unless authorized in accordance with procedures outlined in RCNY Title 15, Chapter 28.

D. In the event of a noise complaint or specific exceedance, the Contractor shall respond in accordance with RCNY Title 15, Chapter 28 and NYCAC Title 24, Chapter 2.

3.03 AIR EMISSIONS AND ODOR CONTROL

A. Air emissions and odor will be monitored by others in accordance with the Community Air Monitoring Plan (CAMP; TRC, 2017) prior to and during dredging and capping operations. Exceedances of action levels will be communicated to the Contractor by the Owner's Representative or their delegate. The Contractor is responsible for implementing air emissions and odor controls in response to specific exceedances. The nature and extent of corrective measures will be determined based on consultation with the Owner's Representative. Corrective measures may include, but are not limited to:

1. Modifying operating procedures;

2. Installing additional engineering controls;

3. Modifying equipment used for construction activities;

4. Adjusting application rate of odor control materials; and

5. Slowing or suspending construction activities until air quality is restored to below applicable threshold criteria.

B. Dredged Sediment and Debris Air Emission and Odor Control

1. Odor suppressant foam shall be available for use to control air emissions and odor. At a minimum, foam shall be available for daily application for the duration of dredging activities to both areas where debris and sediment containers are stored located, i.e. (1) on the barge and (2) on the asphalt pad. Additional foam shall be applied to maintain compliance with air emissions and odor thresholds defined in the CAMP (TRC, 2017).

C. Water Treatment System Air Emission and Odor Control

The Contractor shall use Best Management Practices (BMPs) to control odors, which include but are not limited to:

1. Reducing odor production via disinfection to control bacteria growth;

2. Reducing odor and air emission transmission by installing closed-top tanks or removable covers to cover tanks; and

3. Odor masking or counteraction only used as a stop-gap measure.

3.04 WATER QUALITY CONTROL

A. Water quality in the 4th Street turning basin and main portion of the Canal will be monitored by others prior to and during dredging and capping operations. Exceedances of threshold levels will be communicated to the Contractor by the Owner's Representative or delegate. Turbidity buoys, referred to herein as sentinel buoys, will be present in the 4th Street Turning Basin and main portion of the Canal to monitor water quality in proximity to in-waterway construction activities just outside any deployed engineering controls. Turbidity buoys, referred to herein as ambient buoys, will be deployed away from in-waterway construction activities. The Contractor shall avoid damaging equipment or interfering with operation of equipment.

B. The following threshold criteria will be applied to all in-waterway construction activities:

1. The Trigger Criterion shall be reached if any of the following apply:

a. The rolling average of the sentinel buoy turbidity measurements over a one hour period exceeds the rolling average of the ambient buoy turbidity measurements by 20 Nephelometric Turbidity Unit (NTU); or

b. Either an oil sheen or turbidity plume is visually observed outside of engineering controls and in-waterway construction activities cannot be immediately excluded as the source.

2. The Action Criterion shall be reached if any of the following apply:

a. The rolling average of the sentinel buoy turbidity measurements over a one hour period exceeds the rolling average of the ambient buoy turbidity measurements by 40 NTU; or

b. Either an oil sheen or turbidity plume is visually observed outside of engineering controls and in-waterway construction activities are readily identified as the source.

C. The Contractor shall be prepared to implement appropriate operational and water quality control measures if an exceedance of the threshold criteria for turbidity or oil sheen is observed. Operations will not be stopped due to an exceedance of the Trigger Criterion. Should an exceedance of the Trigger Criterion be reached, the Contractor shall evaluate BMPs and begin implementing corrective actions as appropriate. Should an exceedance

of the Action Criterion be reached, the nature and extent of the corrective measures will be determined based on consultation with the Owner's Representative. Corrective measures are to be outlined in the Contractor Water Quality Control Plan and may include, but are not limited to:

1. Repairing, modifying, and/or installing additional engineering controls such as turbidity curtains or absorbent booms in accordance with Section 02 60 16;

2. Modifying equipment used for the in-waterway construction activities;

3. Adjusting BMPs; and

4. Slowing or suspending in-waterway construction activities until Canal water quality is restored to below applicable threshold criterion.

3.05 SPILL CONTROL

A. The Contractor shall prevent and control spills in accordance with this Section and the SWPPP (Geosyntec, 2017).

B. The Owner's Representative shall be notified immediately of any spills of hazardous materials. Once detected, spills should be cleaned immediately and waste materials properly disposed.

3.06 DECONTAMINATION OF EQUIPMENT AND VEHICLES

A. The Contractor shall decontaminate all equipment in accordance with the Contractor's Decontamination Plan. Potable water shall be used for decontaminating equipment. The outsides of barges and other equipment shall be kept clean to prevent the release of sediment into the Canal.

B. The Contractor shall use the asphalt pad for equipment and vehicle decontamination or build a separate decontamination pad.

C. All vehicles hauling sediment, processed dredged material or debris must be decontaminated before leaving the Staging Site.

D. Decontamination fluids shall be captured and treated through the DWTS.

E. Water used for decontamination of components of the DWTS after decommissioning of the DWTS shall be captured and properly discarded off-site in accordance with local, state, and federal regulations. All other equipment must be decontaminated prior to decommissioning of the DWTS.

3.07 SEDIMENT AND EROSION CONTROL

A. The Contractor shall perform sediment and erosion control in accordance with Section 01 57 13, the SWPPP, and the Construction Drawings.

[END OF SECTION]